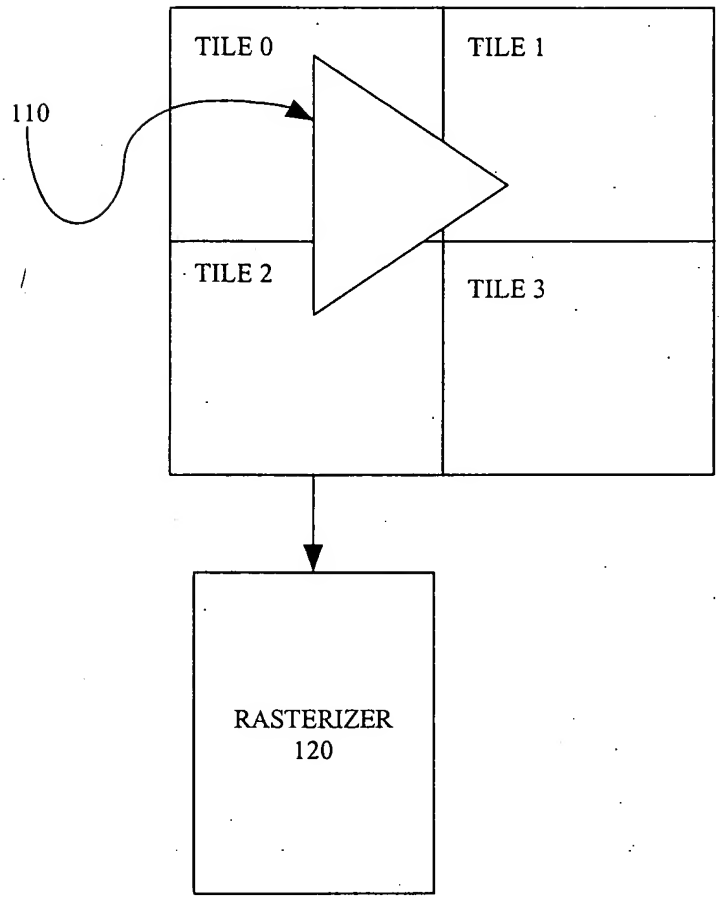

FIGURE 1

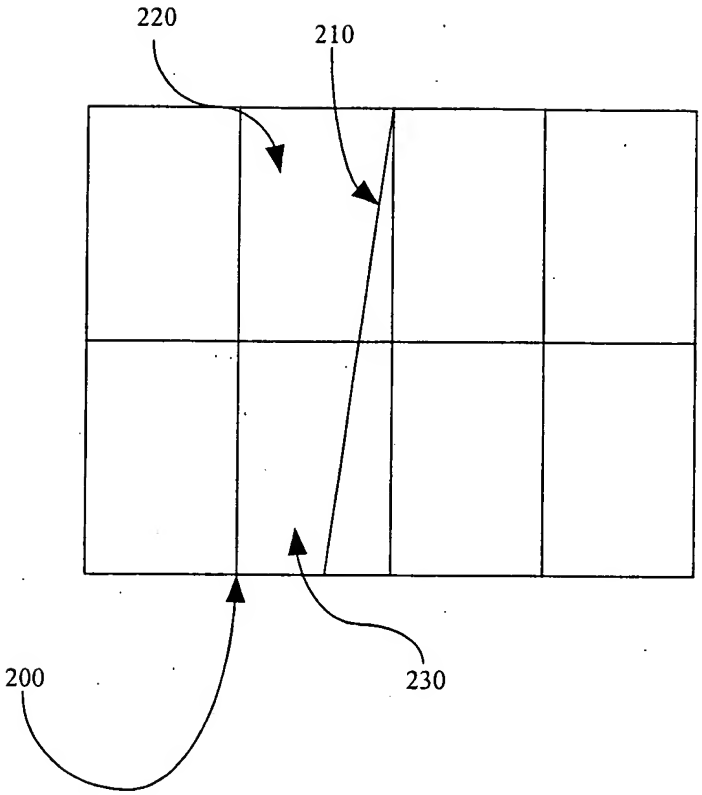

FIGURE 2

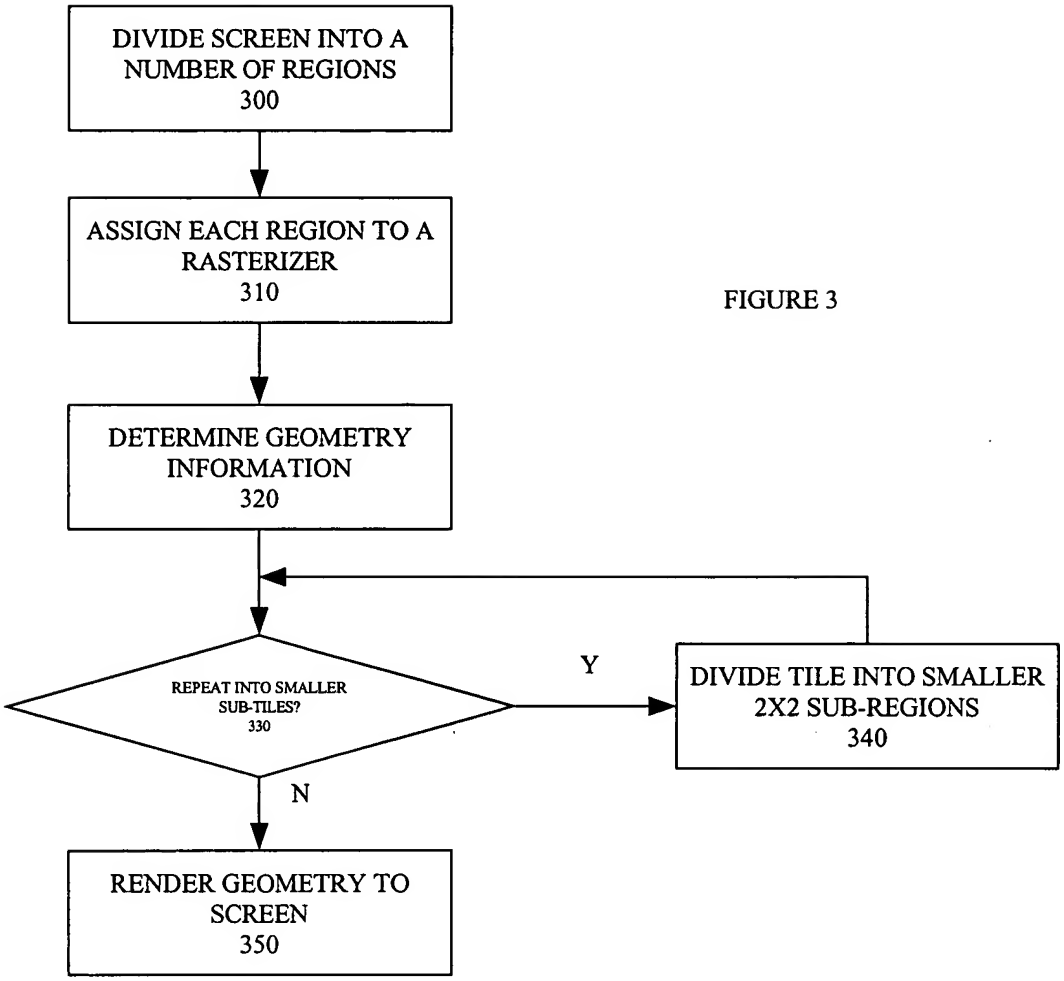
DIVIDE SCREEN INTO A NUMBER OF REGIONS
300
ASSIGN EACH REGION TO A RASTERIZER
310
DETERMINE GEOMETRY INFORMATION
320
REPEAT INTO SMALLER SUB-TILES?
330
Y
DIVIDE TILE INTO SMALLER 2X2 SUB-REGIONS
340
N
RENDER GEOMETRY TO SCREEN
350

FIGURE 3

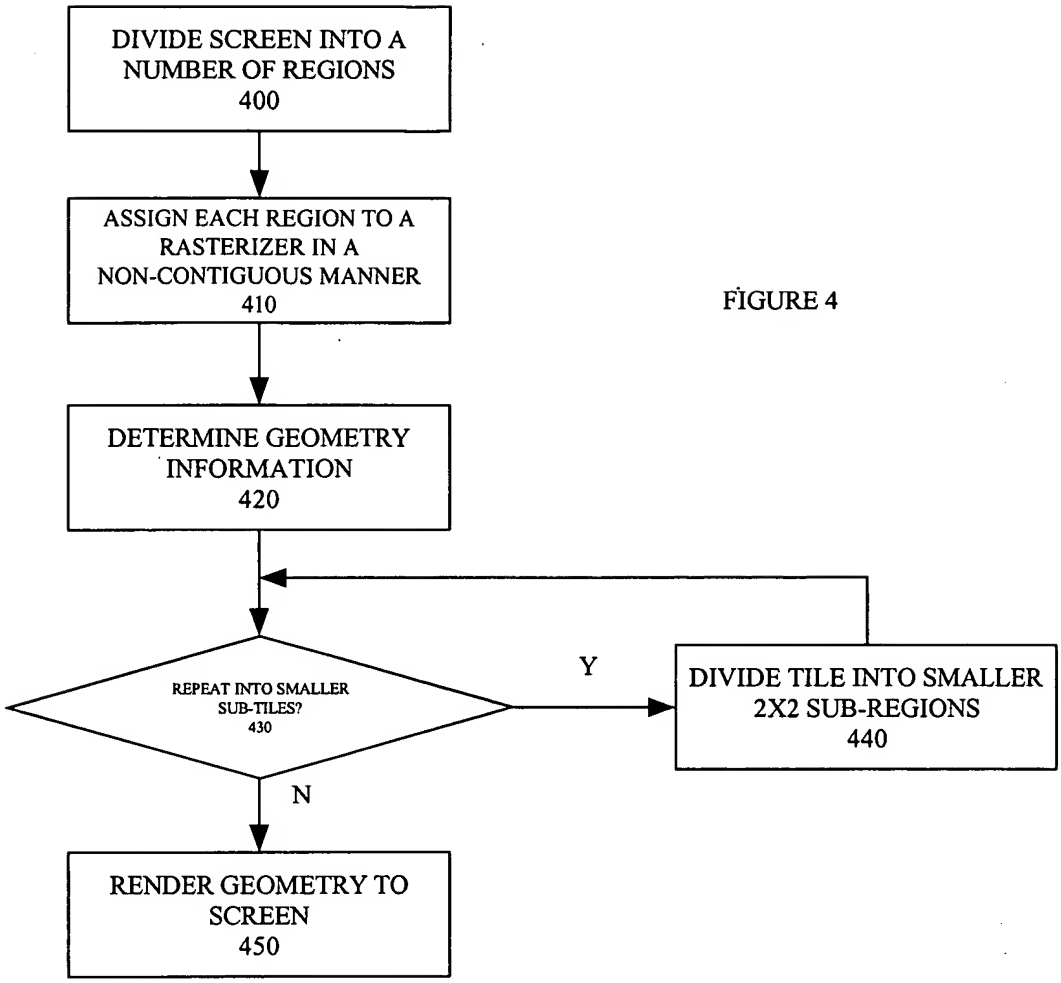
DIVIDE SCREEN INTO A NUMBER OF REGIONS
400
ASSIGN EACH REGION TO A RASTERIZER IN A NON-CONTIGUOUS MANNER
410
DETERMINE GEOMETRY INFORMATION
420
REPEAT INTO SMALLER SUB-TILES?
430
Y
DIVIDE TILE INTO SMALLER 2X2 SUB-REGIONS
440
N
RENDER GEOMETRY TO SCREEN
450

FIGURE 4

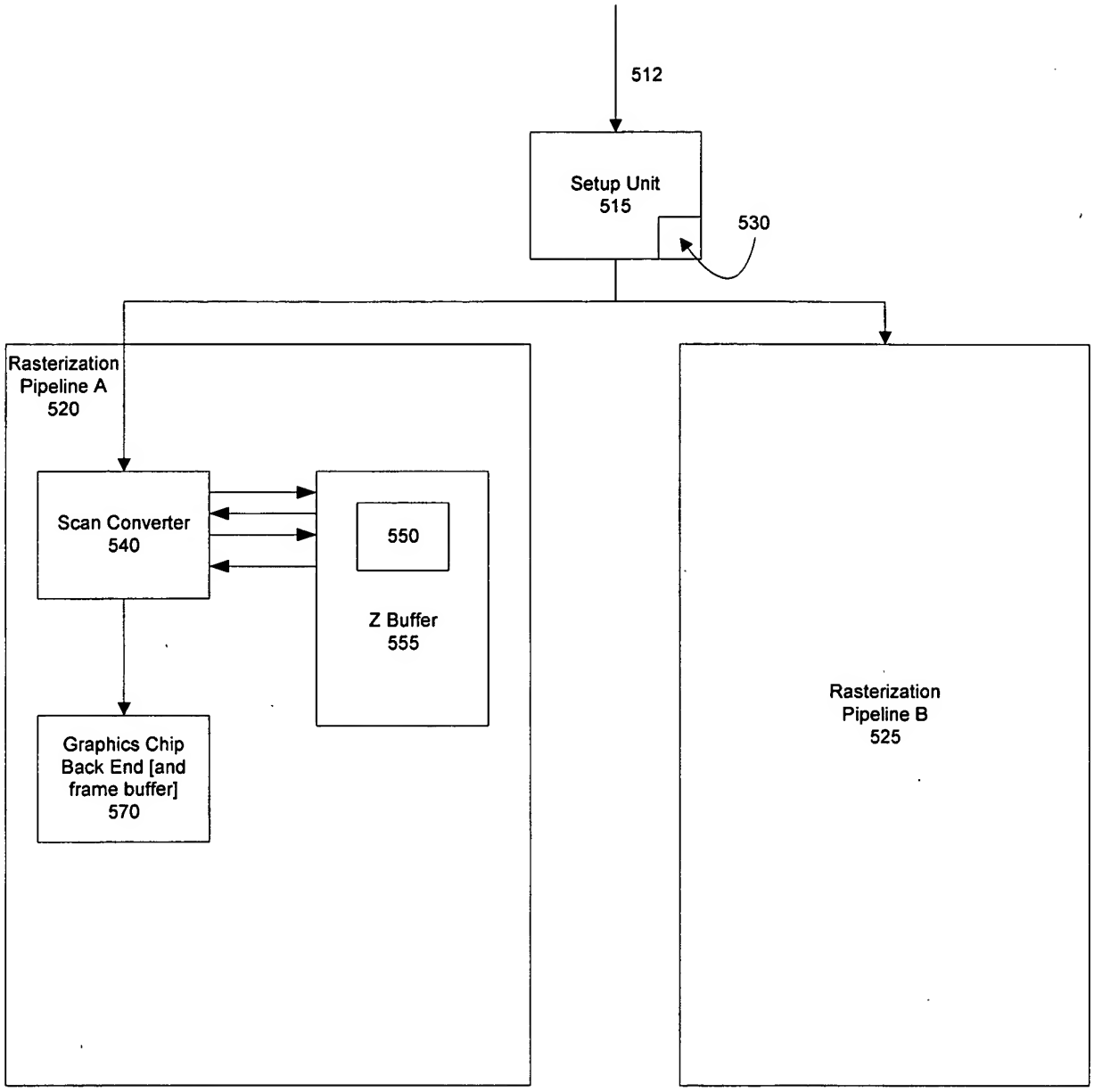
512
Setup Unit
515
530
Rasterization
Pipeline A
520
Scan Converter
540
550
Z Buffer
555
Graphics Chip
Back End [and
frame buffer]
570
Rasterization
Pipeline B
525

FIGURE 5

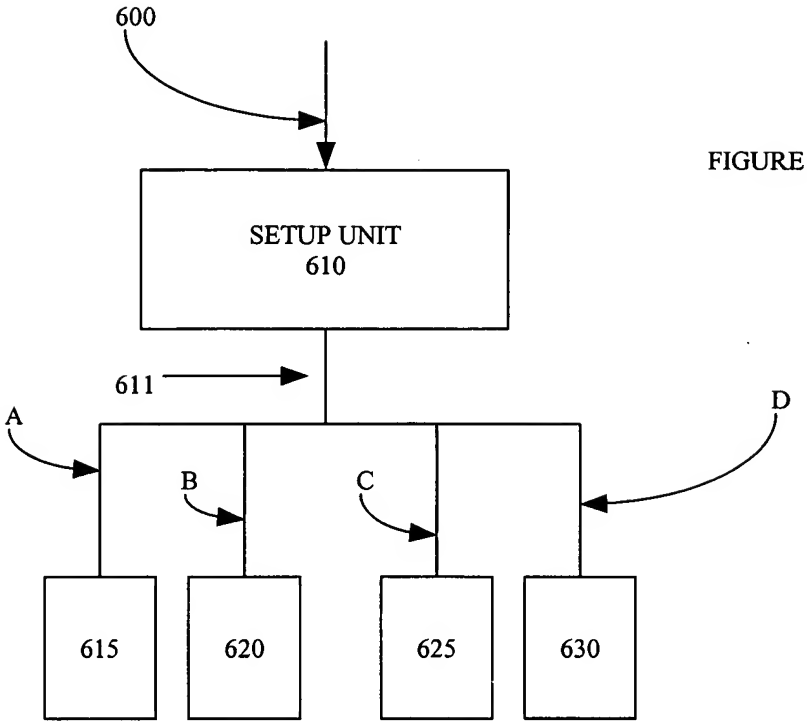

FIGURE 6

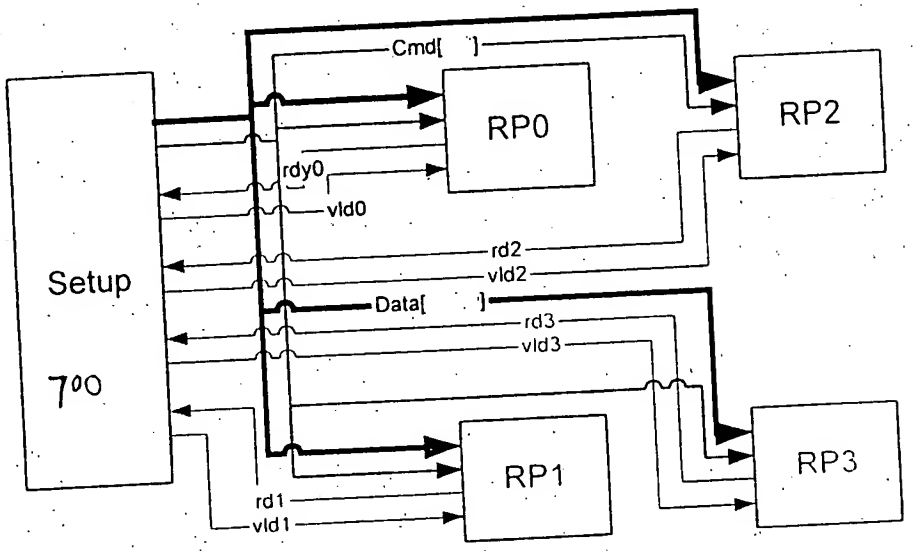
Cmd[ ]
RP0
RP2
rdy0
vld0
rd2
vld2
Setup
700
Data[ ]
rd3
vld3
RP1
RP3
rd1
vld1

Figure 7

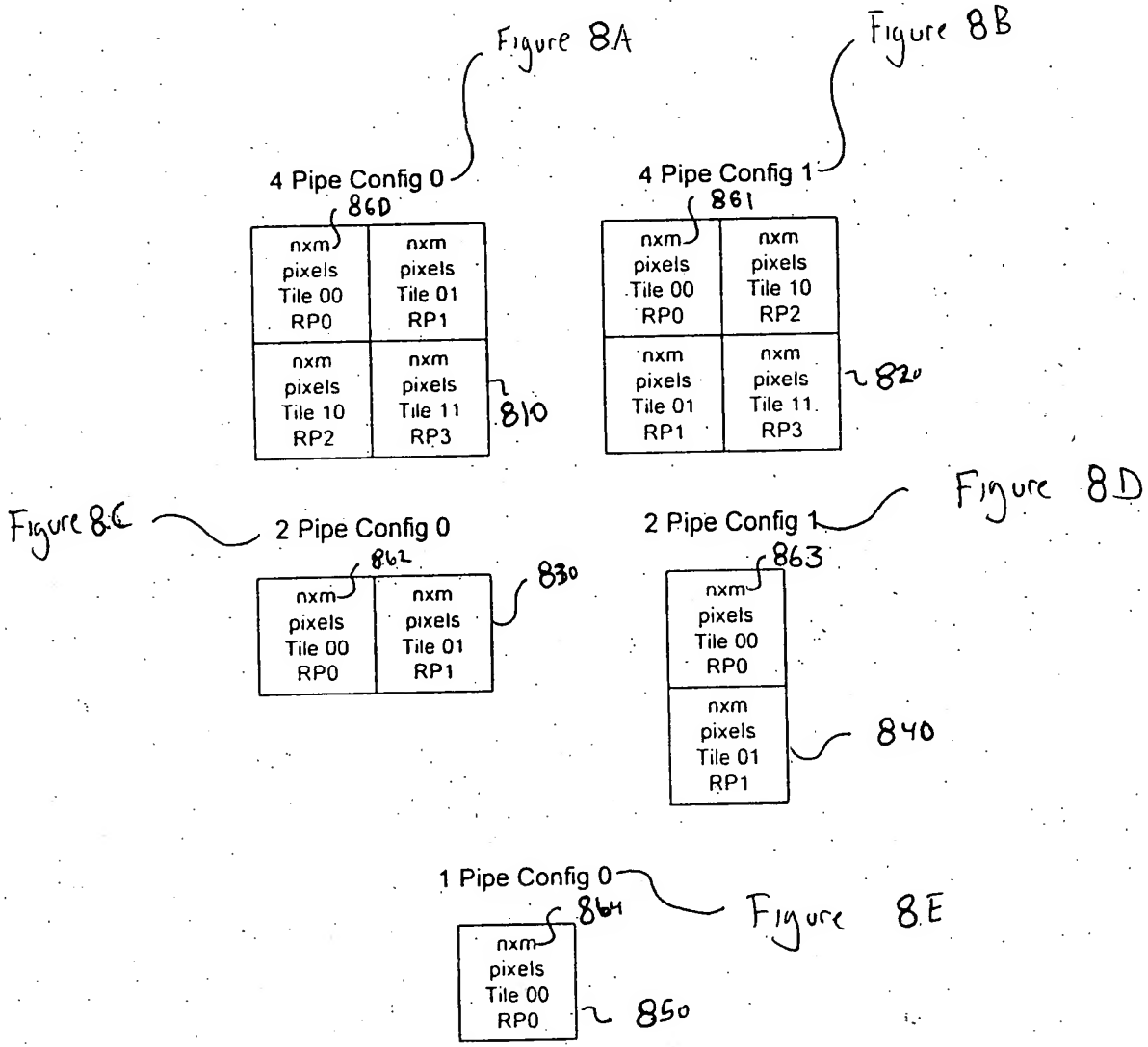
Figure 8A
4 Pipe Config 0
860
nxm pixels Tile 00 RP0
nxm pixels Tile 01 RP1
nxm pixels Tile 10 RP2
nxm pixels Tile 11 RP3
810
Figure 8B
4 Pipe Config 1
861
nxm pixels Tile 00 RP0
nxm pixels Tile 10 RP2
nxm pixels Tile 01 RP1
nxm pixels Tile 11 RP3
820
Figure 8C
2 Pipe Config 0
862
nxm pixels Tile 00 RP0
nxm pixels Tile 01 RP1
830
Figure 8D
2 Pipe Config 1
863
nxm pixels Tile 00 RP0
nxm pixels Tile 01 RP1
840
1 Pipe Config 0
864
nxm pixels Tile 00 RP0
850
Figure 8E

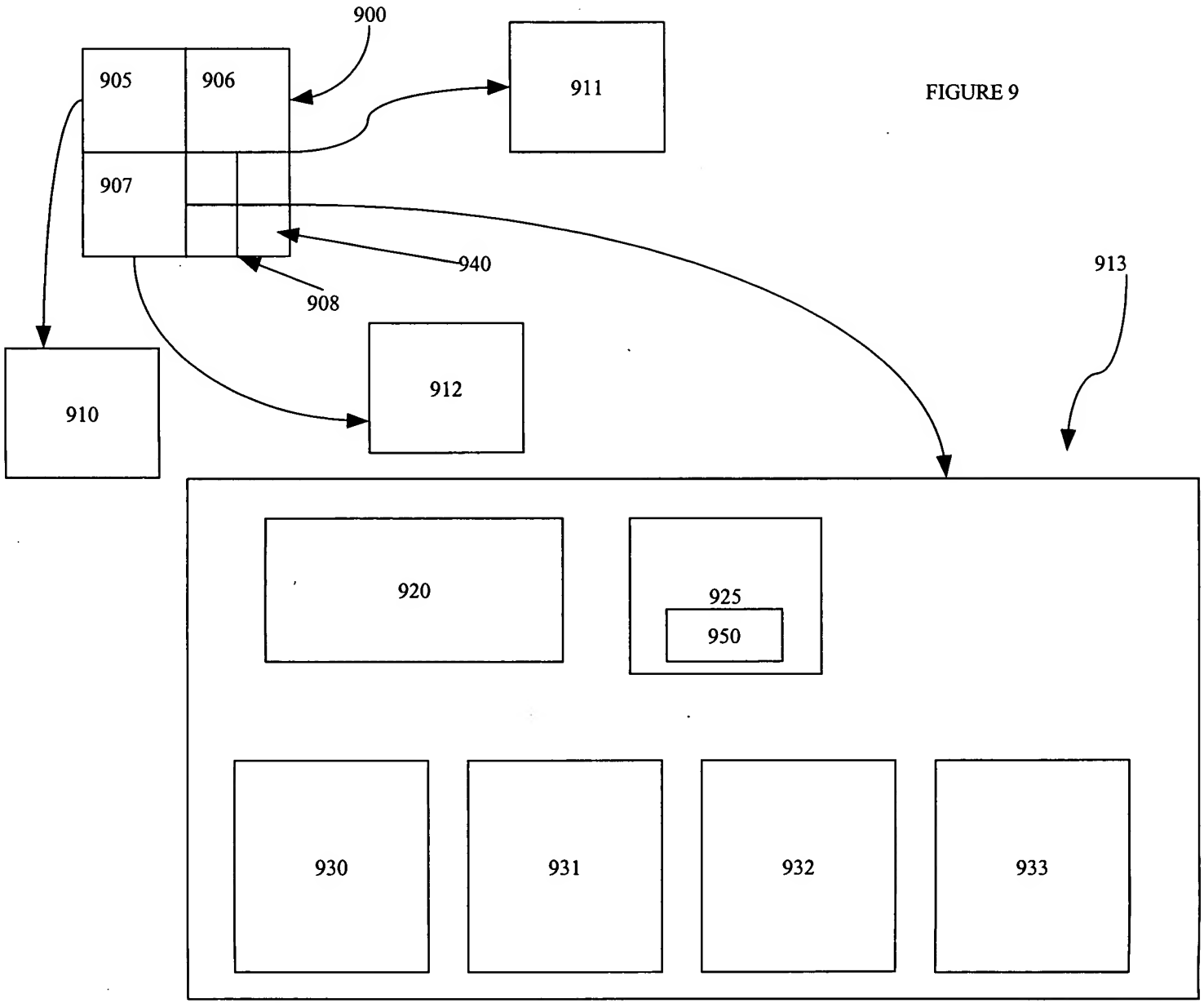
900
905
906
911
907
940
913
908
910
912
920
925
950
930
931
932
933

FIGURE 9

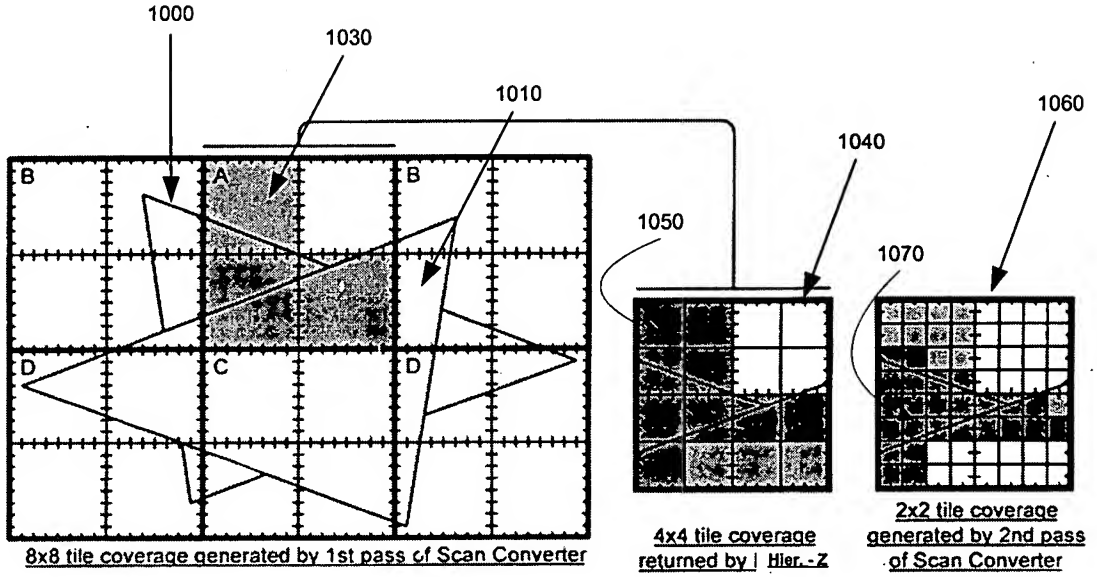

FIGURE 10A FIGURE 10B FIGURE 10C

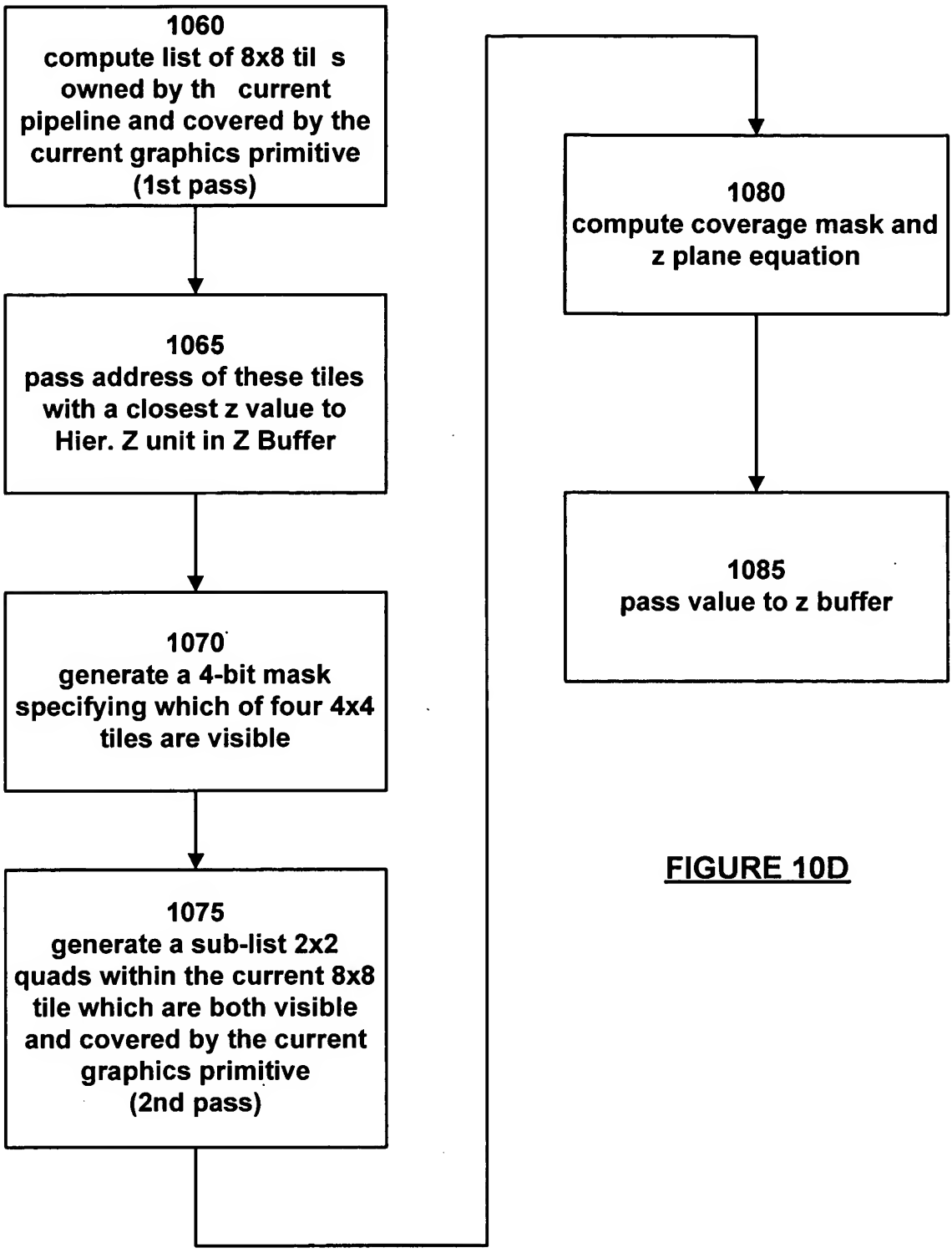
1060
compute list of 8x8 til s owned by th current pipeline and covered by the current graphics primitive (1st pass)
1065
pass address of these tiles with a closest z value to Hier. Z unit in Z Buffer
1070
generate a 4-bit mask specifying which of four 4x4 tiles are visible
1075
generate a sub-list 2x2 quads within the current 8x8 tile which are both visible and covered by the current graphics primitive (2nd pass)
1080
compute coverage mask and z plane equation
1085
pass value to z buffer

FIGURE 10D

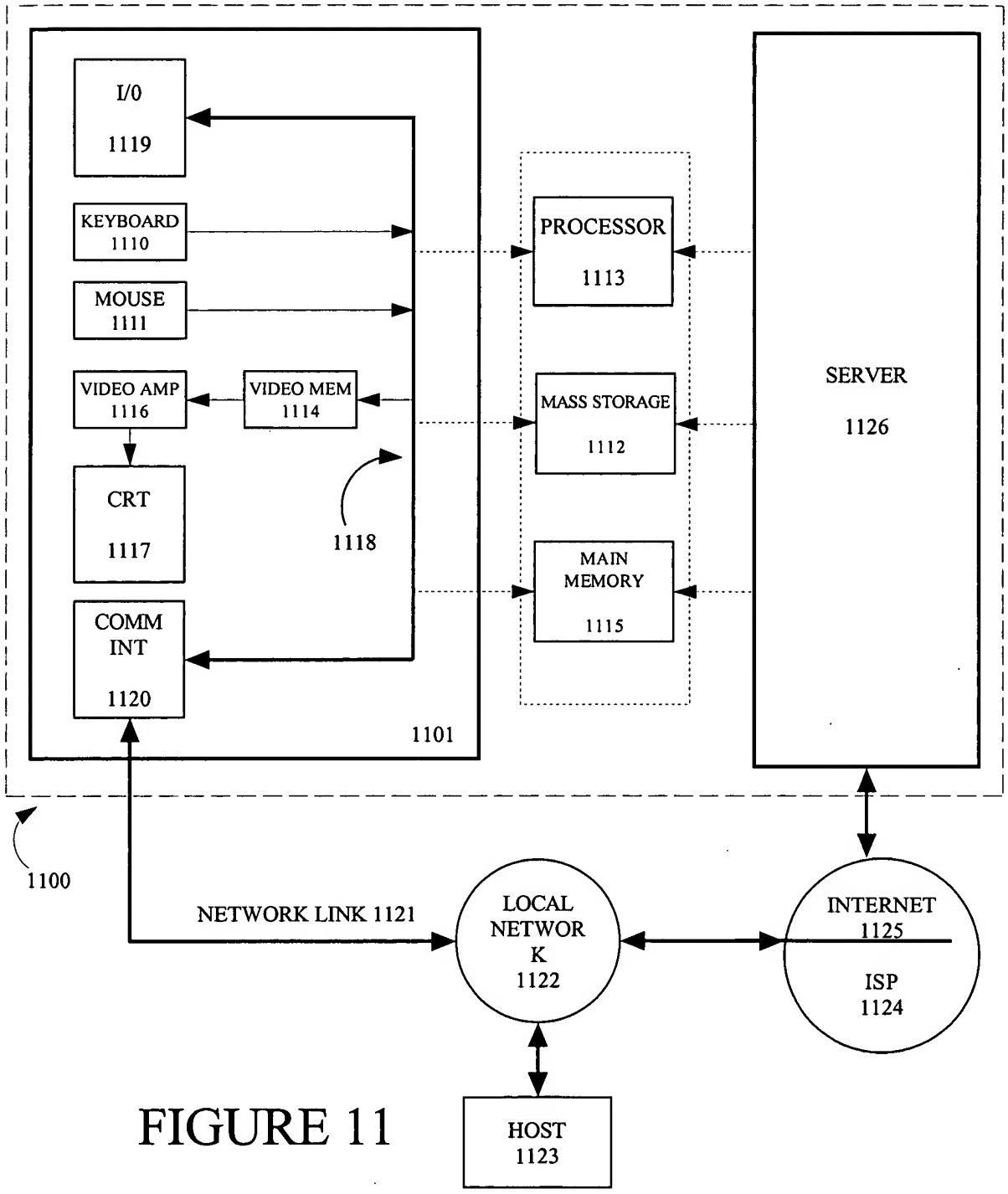
I/0
1119
KEYBOARD
1110
MOUSE
1111
VIDEO AMP
1116
VIDEO MEM
1114
CRT
1117
1118
COMM
INT
1120
1101
PROCESSOR
1113
MASS STORAGE
1112
MAIN
MEMORY
1115
SERVER
1126
1100
NETWORK LINK 1121
LOCAL
NETWOR
K
1122
INTERNET
1125
ISP
1124
HOST
1123

FIGURE 11